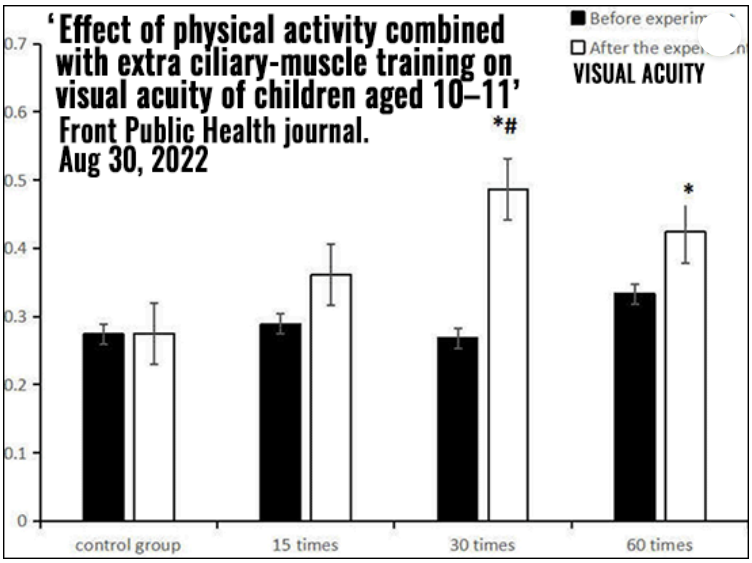
HOW TO KEEP GOOD EYESIGHT AND FIX MYOPIA

By: Joel v.d. Reijden | Date: Nov. 24, 2024 | Last update: Nov. 1, 2025 | Quick draft | Health Center



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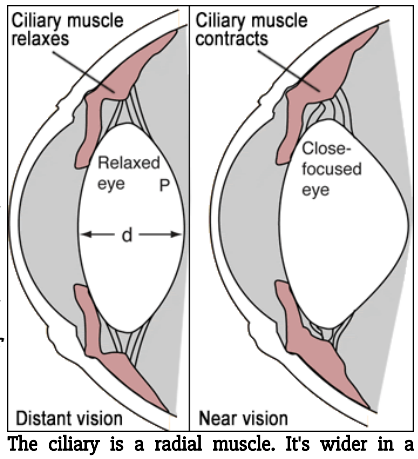
"The early stage of myopia mainly results from the continuous contraction and spasm of the ciliary muscle, which leads to temporary myopia because the lens cannot recover in time when people try to see something far away. If this situation cannot be corrected in time, it is easy to progress into true myopia. ... The results of this study showed that after 32 weeks of intervention, children's KVA [kinetic visual acuity] and UDVA [uncorrected distance visual acuity] were significantly improved."



The ciliary is a radial muscle. It's wider in a relaxed state. It's similar to the sphincter, except that the latter is supposed to be tight most of the time.
Just relaxing the ciliary often is not enough though, as for every -3 diopters your eyeball lengthens with 1mm. This lengthening can only be corrected slowly over time, with proper seeing habits.

~ 2023 Front Public Health journal-published study from China.[1]

How to maintain proper vision through childhood

'Untersuchungen der Augen von 10060 Schulkindern'
1867, Prof. Hermann Cohn (Breslau University, Prussia), p. 5.

Wahrscheinlicher, wenn auch nicht wissenschaftlich unantastbar, sind dagegen die Angaben, welche *Szokalski* über die Kurzsichtigkeit in den verschiedenen Klassen jener Gymnasien nach eigezogenen Erkundigungen macht. Er sagt: »Die folgende Tabelle wird uns das graduelle Steigen der Kurzsichtigkeit in den verschiedenen Klassen des College de Charlemagne im Jahre 1844—45 zeigen.

classes of Gymnasium
table will show us the gradual increase in myopia
in different classes of the College de Charlemagne in 1844-45:

Klasse	No. of students Schülerzahl	Myopic Kurzsichtige	Ratio Verhältniss	Wearing glasses Tragen Brillen
Septima ± age 10	65	0	0	keine. None
Sexta	86	4	1 : 21 5%	keine. None
Quinta	92	3	1 : 31 3%	Brillen.Glasses
Quarta	106	5	1 : 21 5%	Brillen.
Tertia	96	7	1 : 14 7%	Brillen.
Sekunda ± age 15	88	8	1 : 11 9%	Brillen.
Rhetorik	102	13	1 : 8 13%	Brillen.
Philosophie ± ages 16-18	98	11	1 : 9 11%	Brillen.
Physik und Mathematik	74	38	1 : 2 50%	Brillen.
Summa	807	89	1 : 9	

Gymnasium in 1845: From 0 to 12% myopia in about 8 years - with the physics and math "nerdboys" having 50% myopia. Nearsightedness becomes an issue everywhere mandatory education is introduced.

Before modern, mandatory education was introduced, apparently about 1-5% of people were myopic. In contrast, te Far-East Asian pressure system of education is so disastrous that by the early 21st century 80 to

90 percent of people there are myopic because of it. [2] So first up are some quick, mostly uncontroversial, scientifically-backed tips to greatly reduce the chances of myopia development in school-age children:

- Give your child a diet with plenty of fresh greens and other unprocessed, natural food, including meat. Make sure all vitamins and minerals are in check. Vitamin A, vitamin E, or other deficiences can result in vision problems. Do bloodwork in case of doubts.

- Pick a school that has the most amount of daylight shining into the classrooms. And also have adequate lightning for dark winter days. Schools tend to be considerably better at this than in 1867, when it was first documented that *"the number of myopes is proportional to the darkness of the classrooms"* [3] Daylight-wise: the brighter the better.

  Studies of more than a century later have additionally shown how the choroid - a vascular tissue inside the eye - increases in thickness under bright light, which is associated with a lower incidence of myopia. [4]

- Make your kids play outside, or at least get one hobby that's outside, if possible for about 2 hours a day. In Taiwanese experiments, 40 minutes of extra playtime for schoolkids a day, resulted in a 23% reduction of new myopia cases. [5] 80 minutes a day of extra playtime reduced this number by 53%. [6] "Tiger moms" started to protest near the end of the study that the researchers were "wasting" their children's time, and that they could use it to study more. [7] There's no need to be like that in the West.

- Outside activities that might be best in this regard involve playing and watching a ball game, where kids (and adults) have to follow a fast-moving object in the distance and from close-up to far-away very rapidly. Doing this on a daily basis very much prevents the eye muscles from locking the eyes into a nearby focus.

- As long as there's enough light, reading for fun is fine. In one study, Sydney-based children read more than Singaporean kids, because they did this a lot for fun; but only had 3% myopia at their age, compared to 29% for their Singapore counterparts. Another major difference was that Sydney-based children played outside over 10 hours a week more than Singaporean - who always are locked up by "tiger moms" to "study, study, study"... [8]

- Hence, there doesn't seem to be an immediate need to limit regular studying hours for western educations, as long as certain adaptions

in lifestyle are made.

- Read in dark theme as much as possible, as the white letters-on-black background stimulate the thickening of the choroid. In contrast, black letters-on-white background decreases the thickness of choroid, which is strongly associated with the onset of myopia. [9]

- It appears that a lot of close-up work isn't necessarily bad, as long as you also get that daylight and some "long-distance visual action" each day. We do use smartphones a lot though these days though, so it might be wise to not expose children too much to them, in part because *"it's been found that for every year the onset of myopia is delayed, the ultimate severity of the condition is reduced by 0.75 diopters."* [10] And so-called "high-myopia" of greater than -6 can lead to various additional eye problems, including blindness. [11] As can be seen above, introducing dark theme as much as posisble can help.

- Expect good academic results from your kids, but limit academic pressure and stress as much as possible. In other words, be an involved, caring parent with a healthy relationship to your children. This type of stress leading to myopia always was a major argument of William Bates. His work is very purposely ignored by "mainstream" eye researchers, but, in the view of this author, the data they have produced does seem to indicate that this type of stress is a factor.

- Teach your child to not be a nerdboy. Make him comfortable early on with dancing, flirting and the opposite sex in general. Teach him to work out and have a good body, etc. Also teach him/her to fight through MMA, BJJ, wrestling, or (Thai)boxing. Kids that end up being afraid of the world, cooped up inside with their books and worries, are bound to develop myopia. Apart from that, there really seems to be some kind of "emotional-intellectual makeup" issue tied to myopia, just by looking at the historical 50-80% rates of myopia among students of math, physics, and theology, or similar numbers from orphan homes. Granted, in this case these numbers are from the 19th century. [12] More modern numbers are not so clear, but glasses do greatly increase with the height of education. And behavior often seems to match it.

Restoring 20/20 vision

Mainstream ophthalmologists and eye researchers tend to conveniently claim that restoring 20/20 vision isn't something that can be done in any

known, natural, non-invasive way. Luckily though, as the next sections demonstrate, the ophthalmologist "geekboys" have had a bit of a "myopic" vision on the subject, and - by focusing so much on "genetics" - actually seem to have regressed in their insights on the subjects between 1867 and the early 21st century, when myopia levels in the Far East simply became so extreme that some more research just had to be done.

Coincidental cures and improvements

While I've always been too lazy to properly implement the Bates Methods for any period of time, I know of at least two people for certain who restored their eyesight to 20/20:

1. One is my father, who for years had prescription glasses of -0.5 for driving at night. After maybe a decade he all of a sudden didn't need them anymore - and was measured at being back at 20/20. Nobody, of course, really asked how that was possible. But it was.

2. I discussed my glasses with an old colleague of mine at one point, mentioning that there existed something as the Bates Method. He explained he used to wear glasses too, but after a 3-week summer vacation to France, during which he never wore his glasses, all of a sudden his eyesight was restored to 20/20. He never needed to wear glasses again, despite sitting in front of computer screens over 12 hours a day.

Occasionally you see similar comments online:

1. **YouTube comment:** *"I once noticed an improvement in my eyesight after spending few days in nature without my glasses."*

2. **YouTube comment:** *"I lost my glasses and went without them for 13 months... to my surprise my eyesight improve in my left eye. I was expecting it to be worse... I was baffled and so was my optometrist. [Todd Becker] certainly explains it."*

3. **YouTube comment:** *"My myopia went from -3.25 to -2.00 in one year, confirmed by my eye doctor. The only life styles changes I had during that year are more time spending outdoors and not using any glasses for near work."*

4. **YouTube comment:** *"Doctors kept prescribing me stronger and stronger glasses, till I said STOP! After -5.0 I started to lower it myself, I am currently at -2.00. I do not wear glasses nonstop, just when really needed."*

5. **YouTube comment:** *"I had a -2.75 on both eyes in 2011 and then went without glasses completely until an exam in Oct 2014, which revealed -2.25 in both eyes. Not sure what caused a -0.50 decrease in my myopia."*

The same eye improvement results have come from people who more consciously took off their glasses and sought the outdoors:

1. **Reddit comment:** *"Yeah active focus harms your eyes more than helping most times, because a lot of the times our eyes struggle to relax, not struggle to focus. I blink hard and I often walk outside without glasses, not focusing or forcing my eyes to do anything. Just relax and slowly massage around my eyes. Took a year. My left eye was -5.50 and right eye was -5.75 for 7 years. I started doing the relaxation eye routine outdoor one year ago, my glasses suddenly felt too strong and my eyes constantly feel fatigue wearing glasses. Went for a check and realised how my left eye is -5.25, right eye is -4.75.*
   When you have time, stand up and blink hard, then stretch arms or move your body and limbs to increase blood flow, helps with eye pressure, don't force it, eyes are very fragile, slowly after you done it every day for 1-2 weeks you realise your eyes relax better and focus better than in the past.
   Most importantly is to allow eyes to relax and rest. Warm eye mask is extremely helpful as well."

2. **Reddit comment:** *"I was technically worse than -2.5 at one point. ... No[w] I'm only -0.4 indoors in broad daylight in the shade and 20/20 or 20/15 on snellen. But outside in the sun is probably-0.1 or something Idk. Definitely -0.1666 because the snellen chart is fully clear and I can read the 20/10 line on it from 6m. But it's at least -0.25 better in sun, so I'm -0.15 or -0.10. I'll have to go outside and measure now and setup something where I can move back to 10-21m across my backyard the long way. ...*
   August 2013: I turned 9 and [had] normal [vision] my whole life.
   October 2013: -0.5 spasm bc of too much closeup.
   Winter 2013: More closeup.
   2014: -0.75.
   Summer 2014: -1. ...
   May 2022: overminus to -2.25L -1.5R same cyl.
   Oct 2022: it was blurry 4-5m so more than -2.5 -1.75. That was my breaking point so I stopped wearing them.
   Later November; -1.8L -1.35R.
   Mid March -1.5L -1.25R & then I learned active focus.
   Late March -1.25 mostly even.
   Later April: -1 even more even.

May -0.75 even.
June: -0.5.
July -0.4."

3. **Matt's EndMyoptia testimony:** *"It made me always wonder: why is the thing that your are giving me making it get worse? Because I go back a year later and it is worse. ... I just started trying to take my glasses off. Which doesn't work at all when you have -5. ... It's so bad. ... I'm sitting outside after we put our daughter to bed. ... and I hadn't found Endmyopia. I hadn't found anything at this stage. I'm just playing with this. And I have this devotional [inaudible] that has some text on one side. ... You look at it and I blink, and suddenly I can see it. And then I look at the other side and suddenly I can see that. So I started reading without my glasses from the very start. ...*
About a week later I walking around with the minus 5s on and they feel like too strong, new glasses. I walk to where I have my old pair of glasses on. I don't remember what they were, but half a diopter lower probably, put those on, and everything is completely clear. ...
Eventually I find the predecessor to Endmyopia, which helped me to put all the pieces together. From that stage I started reducing from there. It was months later that I went to the optometrist... He gave me, I think, 3.25 in the dominant eye. And something less than that in the non-dominant eye. ...
Yeah, I have 'em in the car. I went back up to -1.25 for that. I reduced too fast along the way... I got stuck at -1. ... Then went back up to -1.25. ... I went down to -0.75. ... You know, the last bit... there are times when it looks clear, and then it goes away."[13]

4. **Gina's EndMyoptia testimony:** *"I did the measuring with the centimeters, over like a week's time... And I immediately went down to 5.75 and 5.00, so that was three-quarters right off the bat. ... I did take the advice of going around without glasses for as much as I could for almost like a whole day. ... So that made a huge difference. ... And that's a trick that I still use, if I have been inside... It helps me get back to seeing well."*[14]

Bates Method

Dr. William Bates (1860-1931) was a pioneer in vision improvement in the early 20th century. His Bates Method and books though are antiquated, ultra-long-winded and vague in their explanations, with some eccentric components. Some of the key physiological components also were incorrect. In summary:

1. Bates thought the muscles surrounding the eyeball determined clear vision by changing the shape of the eyeball. This is not true. These

days we know that the ciliary muscle surrounding the lens is responsible for this.

2. He was right that eye strain and minus lenses cause myopia, but he lived in a different time, where lens- and nearbye-work-induced myopia hadn't really been experiened at a mass scale yet. Therefore he offered little for people who have to work behind computers for many hours a day. Mere relaxation of the eyes and focusing on distance vision is not enough in the modern era. Additional insights and practices became needed.

Despite this criticism, today's "active focus", "print pushing" and "rocking" exercises are important, but relatively minor adaptions of Bates' core ideas of central fixation and relaxation, the later including exercises such as "swinging", "palming" (with or without imagining a tiny black dot), sungazing (with closed eyelids) and in general seeking the outdoors. Our physiological insights improved, our exercises became more diverse, but today's vision improvement concepts largely are the same.

Pure Bates Method success stories seem far and few in between, although the original system does seem to work effectively for curing astigmatism (double vision / ghost vision; predictable in musicians who play and read sheet music with one eye at an angle). Bates Method techniques mixed with those of other systems also seem to work:

- YouTube comment: *"I tried bates method for like 5 days. It did have a slight improvement, but it was temporary. Lol."*
- Reddit comment: *"Relax yourself and your eyes. Close them, then blink softly with longer blinks. ... Open your eyes and aim for a specific letter that's blurry but that you can recognize. This is called central fixation. Don't aim for the entire word.*
  Repeat 1 and 2 until the letter then entire word clears up. Don't force it. Eventually with time your vision will get sharper overall and you'll just need to blink for it to clear it up. I recommend getting a snellen chart to track your progress. I didn't think I was getting anywhere until I realized I read the 20/70 line without active focusing. I could barely do the 20/200 before."
- YouTube comment: *"I read Bates' book and did exercises every now and then and once in a while my eyes will clear up and I'll get a stinging sensation and tears like you described [, Mark Warren]. It's like I'm seeing clearly and blurry at the same time.* ***One particular exercise that I learned from Bates that seems to work the best for me is imagining a black dot, the smaller and darker the better. I'm not sure why that works but usually when I do that my eyes will clear up for a few seconds.****"*

- **YouTube comment:** *"I read some user experiences with Bates method curing their astigmatism and I was getting curious. I integrated additional eye muscle training at this point and this was the decisive element. My astigmatism was finally reducing and very quickly. I realized instant gains already after the first week. The monocular double vision in my right eye finally started to vanish. ... For lense induced axial elongation of the eye-ball (lense induced myopia), [the Bates Method] is probably not the most efficient method and active focus with reduced lenses (Jakys method) is addressing this issue to the point."*
- **Jan. 20, 2022 YouTube video 'See Clearly', 'How I Fixed My Astigmatism | SEE CLEARLY':** *"I think it was brought about by wearing spherical lenses [for] work on the computer and I did feel a lot of stress and strain in that eye. So I think it had something to do with that. Fast forward a little bit further, and my astigmatism got to 0.75 [lower end of "mild"] in my right eye, at its worst. ...*
  In order to solve astigmatism, we have to think about active focus ... but a little bit different. ... Short example: before, where you would look at some text, you would look at some text and bring that a little bit away from you until you get a little bit of blur. And then you would look at that text, and blink, and then bring it into clarity using ***active focus****. That was for SPH or myopia blur. For astigmatism, it is slightly different. There is another type of active focus if you wan to call it that. So in order to demonstrate that, I bring up this image again of the birds on the lamp post [where] we want to focus on the dark image, which is the main image. The faint ghost image besides it is not a real image. That is our refractive affair. ... In your mind, focus on just the dark image. ... The ghost image might start to move around. ... You might get periods where it momentarily fuses together, but then it will go back... This is completely normal. ... Practice it 5 or 10 minutes a day. At the beginning you can do it at something in the distance. I have a lamp post outside of the window that I used to practice on. ... Over time it fused together."*
- **YouTube comment:** *"I managed to cure my astigmatism to a great extent in very short time just by watching your videos. Very well explained. Thank you so so much. You are the best!! :)"*

Todd Becker Method

As said, there are improved, more modernized systems of vision improvement than the Bates Method. These systems largely are focused on the exact same concepts. At the moment, maybe the most practical is the one of Todd Becker.

Similar to Jake Steiner of EndMyopia.org, Becker is focused on the concept of "active focus". He just implements it differently, referring to it

as "print pushing". With his "print pushing" method he recommends reading for 2 to 4 hours a day just in and out of the blur horizon, trying to improve vision in this manner. You take breaks every 15 to 30 minutes, during which you look at objects near and far. As for improvements:

1. The first improvements should come within a few weeks.
2. Improvements in the beginning usually occur faster than later on.
3. Sometimes no improvement is seen for weeks, only for a big leap to appear.
4. Eventually you can start to experience "clear flashes" in the distance.

Once you can see at 20 inches / 45 cm (about -2.5), you introduce plus lenses to read with, to add -0.5 each time, to give your eyes a work out. If now you can read from 15 inches / 38 cm, until you eventually increase to read 20 inches / 45 cm again. This method might not be without evidence. Apparently a 2017-published study demonstrated *"that positive (+) Add lenses, used as reading glasses during study, can prevent the development of myopia."*[15]

From his own personal experience, Becker also teaches the correction of astigmatism, which comes down to double or ghost vision. He recommends to look at such a thing as powerlines, identify the darker "real" image, and to slowly fuse the two images.

Positive experiences with the Todd Becker Method:

- **YouTube comment:** *"I started at -3.5 diopters, after consistently following the technique described here by Dr. Todd [for the past 3 years], my current vision is at -0.75 diopters. ... I am able to drive on highways and can spend most of my day without wearing glasses. However, my progress seems to have stagnated for the last 6-7 months. I have not tried the Plus Lenses yet."*
- **YouTube comment:** *"From India - Myopia - 1.... Done everything as suggested by sir then 4 months Myopia reduced to - 0.75 and now after 6 months it is - 0.5. Process is slow but it definitely works."*
- **YouTube comment:** *"I saw this video about one year ago, and have been used this method since then; so far my left eye went from -1,50 to -1,00 and right eye went from -2,25 to -2,00."*
- **YouTube comment:** *"I had -7.50 in both eyes and a full year later I now have -5.50 in both eyes. This method works!! Thanks so much for this video."*
- **YouTube comment:** *"This really worked for me. My eye strain reduced, my eye pressure reduced, my eyesight improved from 20/80 to 20/25. Just a little more to go until I'm back at 20/20."*
- **YouTube comment:** *"In July, I went to the optometrist for a new prescription which was - 4.75 in each eye. ... I've now incorporated*

active focus and print pushing into my daily routine, along with a few other eye exercises, and have seen amazing results. In the last five weeks, I've managed to reverse 5 years of vision deterioration. I'm now on a pair of glasses I used in 2014, which I can even drive with now. This prescription is a whole diopter lower."

- YouTube comment: *"I measured my eyes going from 20/50 (-1 Diopter) to, 20/20 (+0.5 Diopters) in about one year. [I was] using a +1.75 Diopter (for near)."*
- YouTube comment: *"I watched this video about 9 months ago and I immediately started on this journey. My prescription was -2.0 back then and just recently when I had a review, I was given a -1.25."*
- YouTube comment: *"Just a little testimony here. Did this consistently for a month. Right eye went from -4.00 to -3.50 and my left went from -3.50 to -3.00. Doctor always said she saw improvements with the astigmatism in my eyes as well. The key to this practice is consistency and patience."*
- Reddit comment: *"I definitely attest to the benefits of [print pushing]. In fact I've been keeping a journal... Started 1/14/17 with a edge of focus ... of about 14 - 14 ½ inches. It is now June 9th and my edge of focus is about 17 ½ - 18 inches, which is a huge change. If I had to put an estimate on it, it's been a change of almost .75 diopters in 6 months! (note: I say .75 because the first .25 happened so quickly I don't count it. In actuality it's about 1 diopter change)*
  I started this when I my -3.5 diopter glasses began to lose effectiveness and I had to switch to stronger ones, about -4.5 I think. I refused to wear them because I had a suspicion that my vision would only get worse and worse. So I began looking for alternative methods -- anything that could help me improve my vision and I found Todd Becker's site: gettingstronger.org.
  It was life changing. In these 6 months I went from -3.5 diopter glasses to -2.5. Now I'm thinking of buying -2.25 soon as I may need them :). ... Actually my left eye was -3.5, right eye was -3.75. I'm happy to report that my eyes have corrected the -.25 difference and can now see the same with both eyes! ...
  If you have any questions about my techniques, I'd be happy to share some tips. ...
  At -4.5 to -5.5 you will have to go at it longer than I have, but I have heard of some people who have reversed most if not all of their myopia even beyond -6, but it is harder and takes more time. ...
  If you strain your eyes you're doing it wrong. The point of print pushing is a slight blur that allows your eyes to focus further and further away over time. There is nothing about a strain involved in this process."
- Reddit comment: *"I went from -2.5 in both eyes to 20/20; I just wanted to share my story. in may 2015 I read about print pushing and started to implement it. Again, the general idea is to be at the*

edge of blur, so that your eyes are making an effort to stay in complete focus.

I was very committed to the process, and pretty much would do print pushing the whole day and really pushing it for about 30 minutes a day (while reading a book).

I printed a vision chart to track my progress and here is the general timeline:

- at 3 weeks I went from -2.5 to -2.0.

- at 5 weeks down to -1.5-1.75 (my test results would vary).

- at 2 months: -down to -1.0 (at this point I wasn't using my glasses at all).

- at 3 months -0.75.

- at 4 months -0.5.

- at 7 months - 0.25 (basically no myopia).

- around 12 months I was 20/20.

I know it sounds too good to be true, it was and still is for me too, but since then I have been to several eye exams and validated my 20/20. in my last eye exam they told me my left eye was -0.25 not enough for needing glasses (specially since my right eye is perfect). So since then I have printed the eye chart again and started to do print-pushing only on my left eye (wearing a patch on my right eye) and I have seen progress. Maybe in 3 more months I'll go to the doctor again. [Update:] In my most recent eye exam, I got 0 myopia in both eyes and only a minor astigmatism in my left eye (CYL -0.5), which is barely noticeable (that's a first time I got astigmatism).

I have tried to "coach" 3 people, but they don't stick to the routine. ...

I'm a programmer so I'll say around 10 hours a day between work and just personal tasks. The key for me when I started the exercises was to place my monitor far enough so that I was always at the edge of blur. Once that wasn't enough I started using +/ reading glasses, so that it will make the monitor appear to be farther and help me achieve the edge of blur. nowadays I still use the +reading glasses when I'm doing close work for maintenance. ...

When I started the whole process I was -2.5 both eyes, so without my prescription classes I was barely able to read a very close monitor without the glasses. So the first months I wasn't using the + reading glasses, as my vision got better I needed the + reading glasses so that I could still be at the edge of blur while reading the monitor; so basically the + glasses help you achieve the edge of blur and do the print pushing even when one is looking at monitor.

Even now a days I still use it from time to time while I work in front of a monitor or while I'm reading for a long period of time, so as not to make my vision worse. ...

Usually you can find them at the drug store as "reading glasses" (or anywhere really) for really cheap. When I was doing my exercise I

bought an assortment of 10 for about 15 bucks with different powers from +1 to + 2.75. I did print pushing and was able to go 20/20...
For myopes, this is done by repeatedly pushing a printed page just slightly outside the range of focus, and allowing it to sharpen up or "clear". (For hyperopes, the page is pulled closer until it blurs, then allowed to clear). The eye gradually adapts to increase its range. This can be done with different objects at different ranges. So it can be done with fine print close up, but also with larger objects in the distance. It is especially useful to focus on sharp lines, such as overhead electrical transmission lines, and houses or trees with sharp edges.
For the focusing exercises, one should periodically push the book or computer slightly out of focal range and wait for the image to clear again. This will cause a slight feeling of discomfort, but the eye will focus as long as the distance is just slightly out of the comfort zone. If your eyes cannot focus, move a few inches closer again until the reading material is just within focus.""

- Reddit comment: *"I have started the journey to recovering my eyes. I buy contact prescriptions -0.25 below at a time. And use + reading glasses for up-close work. I've just gone on to the second phase so it's still fairly new but over time I have seen my eyes adjust to the lower prescription. There is some distance focusing practice you should do to help train them. But I do think it's working generally. ...*
The last year I did a masters program, was constantly working close up on a computer and did not practice my distance vision exercises. My left eye has regressed due to this and I'm not surprised as this was part of what caused my distance vision issues to begin with. I have been finally getting back into the swing of training my eyes again properly."

Jake Steiner on Todd becker's + lenses method

Despite the positive stories, Jake Steiner is critical of the method, at least the + lenses part:

"I suspect [Todd Becker] found some of our stuff [but] that is just half of the game. ... Distance vision improves distance vision. ... Close up vision doesn't improve distance vision for most people. ... It can be done. Some people with persistent enough effort, and all the planets aligning, can improve distance vision just by print pushing. ...

"What happened, after a year or so... I took out a bunch of content about + lenses, because I started seeing it being abused. People started having lots of side effects ... because they were overstraining their eyes with close up and they were not adding any distance vision. [Plus lenses are] extremely counterproductive for a lot of

> *people. There was, I wanna say for a year or two, where just half of my emails were, "What about Todd's thing? And now ... I've got double vision. Fix it." It was frustrating."*[16]

In another video Jake explained:

> *"I got stuck there for a long time too [around -1]. And I played with plus. It helped me at certain points. Some people respond really well to plus. And I have never figured out the thread of what works for some people that can just wear plus, what I was talking about: half a diopter, they even get up to 1 diopter, and wear that for extended periods of time, and they get a ton of improvement. But that has never translated into something that works consistently for people, so I can't recommend it. It's just one of those things. If you've gone all the way, right? If you've reduced 4 diopters of myopia and now you are just stuck on that little last piece. Sometimes, playing with that [helps]. And it's not about wearing them a long time. If it works, and if you like it, for 10 or 15 minutes, then do it again the next day. Right? It's not about doing more of it at one time. It's just the repeated frequency of introducing that sometimes helps. ...*
> *There's Todd [Becker] and his approach of just using + for close up and the idea that you can reverse all your myopia without changing any of your habits and the only thing you have to do is put on + lenses. ... For a while he was really popular. ... It introduces new issues that you have to fix before you fix your myopia."*[17]

I can only say I have seen one reply on Reddit talking how Print Pushing made a person's eye worse. In all cases it appears you want to take the + lens practice very slow.

Jake Steiner Method / Endmyopia

Probably the most prominent vision improvement system is the Jake Steiner Method at EndMyopia.org. Steiner is a bit of an unhinged guy, but dedicated people do report improvements that slowly come over a period of months and years. Jake has interviewed quite a few of these people. It is rare for anyone with serious myopia to go all the way back to 20/20 vision though. Experiences:

- **YouTube comment:** *"Bro I do both exercises and the things that you told me about 10 months ago my eye sight was -1 and -1.25 and now after doing this for 9 months my right eye has -0.25 and no number in left eye"*
- **YouTube comment:** *"I did it. It works. Seriously. Took about a year to get to true 20/20 from -2.0 diopter. Just takes consistency and incremental change."*

- **YouTube comment:** *"I started about 2 years ago with -2.75 and a bit of astigmatism now I see well with -1.25... can't wait to get to 20/20. Thanks Jake!"*
- **YouTube comment:** *"This really works! went from -5.5 to -4 in less than a year. Thanks Jake for your brilliance!"*
- **YouTube comment:** *"Started eye excersizes in 2020 and my vision has improved dramatically. I just did focusing near and far. Also I practiced slow blinking and focusing."*
- **YouTube comment:** *"I've actually discovered the same thing in the last couple of weeks (messing around with the Endmyopia method, modifying it) – starting at -3.5 and -1.75 astigmatism, I do get clear flashes of 1-3 sec or so in the way you describe (without glasses, seem to be triggered by deep relaxation, peripheral vision, and motion, the way you say; and for me looking at high contrast edges helps it)."*
- **YouTube comment:** *"-3.25D to now even night time city driving with -1.5D. It was a long journey of 5 years. All thanks to this gr8 human who introduced me to this concept."*
- **YouTube comment:** *"I really needed this video... I improved from -5 to -3.5. And got stuck with the -2 diopters for close up since 2 months. Now I got my mistake [of not staying back at the edge of blur and active focusing sitting behind a screen, with the right presciption]."*
- **YouTube comment:** *"I went from -3 diopters to -1 with Jakes method. All the credits to his method, it works like a charm. ... On my last mile back to 20/20 vision I had to deal a lot with my (rather low) astigmatism which did not improve with active focus alone, even though I was already doing great with diminishing my myopia. ...*
  I actually did sniff in the Bates toolkit... because I read some user experiences with Bates method curing their astigmatism and I was getting curious. I integrated additional eye muscle training at this point and this was the decisive element. My astigmatism was finally reducing and very quickly. I realized instant gains already after the first week. The monocular double vision in my right eye finally started to vanish. And it sticks more and more. I now get almost perfect, sharp outdoor vision for the first time, wearing just 1 diopter glasses without astigmatism (cylinder) correction.
  To sum it up: If you wanna reduce your Myopia, go with Jakes method, it is way more efficient and very comfortable. And if your astigmatism was lense induced (so you had no astigmatism, before you got your first glasses), probably you don't need any eye exercises at all.
  But if you experience monocular double vision (double vision just in one eye) and you have not much success with your astigmatism reduction by active focus alone and you get mad about it, give some additional eye muscle trainings a try. It seems, the muscles also

determine the shape of the eyeball to a slight, and maybe decisive degree. It really helped me to finally get back to clear vision and feeling very happy with it. ...

It would be interesting which kind of people get success with Bates method. It probably addresses pseudomyopia pretty well. For lense induced axial elongation of the eye-ball (lense induced myopia), it is probably not the most efficient method and active focus with reduced lenses (Jakys method) is addressing this issue to the point. "

- youtube.com/watch?v=traKGc2NDWQ (HERE Salesman Jake literally says he only lowered his prescription glasses, even also outside, and changed his habits)

The Jake Steiner Method in a nutshell:

1. Reduce ciliary spasm and strain is the key concept, similar to all modern methods.
2. Reduce your glasses by 0.5 or 0.75 diopter below 20/20 vision for close-up work, or you will progressively get worse vision.
3. Measure eyesight distance to the edge of blurriness. Record your improvements well.
4. Introduce active focus:
    1. In front of computer screen: make sure the screen text is right at the blur edge. If you move your head a bit back, the text should really blur. With a bit of active focus (blink and relax) you can clear up the image. "Getting" active focus tends to be hard for people, and may take weeks or months.
    2. Until you "get it", it appears to be near impossible to describe what active focus is or how to do it. The suspicion is that practicing it forces the brain to make additional neuron connections, similar to how it takes time to learn how to move your pinky by itself.
    3. It appears that many people seem to strain their eyes when trying to see clearly, and employ some form of squinting. There actually are people that have damaged their eyes while practicing a lot of active focus (45-60 minutes a day, for months), leading to white flashes, torn retinas, and lots of floaters in their eyes. Far from everybody has these issues though, so it appears to be related how one implements, or thinks he or she implements, active focus.
5. Go do active focus blinking at a distance. You just walk around outside, inside, everywhere, and try to "active focus" on whatever you want to see clearly. You only should be 0.25 to 0.5 below your actual full correction. You want to have just a bit of blur in the distance that you can clear up with active focus.
6. Always reduce your glasses .25, or 0.5, below 20/20 in order to active focus. Even .25 too high can prevent you from being able to do

active focusing.

7. Be outside for a minimum of 2 hours a day, or results will likely not be great.
8. What to expect: .25 every 3-4 months; initially up to 1 diopter per 90 days (from 20 to 25cm distance).

More concepts ties to the Jake Steiner Method:

- Stage 1: Pseudomyopia: the ciliary muscle temporarily spasms from too much close up work, resulting in blurred vision.
  - 1998, American Academy of Optometry, 'Vision Therapy to Reduce Abnormal Nearwork-Induced Transient Myopia': "Abnormal nearwork-induced transient myopia (ANITM) [is a] transient distance blur that is correlated with a transient pseudomyopic shift in ... distance refractionafter therapy, there was marked reduction of symptoms and considerable improvement in clinical accommodative facility measures"
- Minus (myopic) glasses move the focal point farther back in your eye. Over time, the eye usually adapts to a degree, leading to axial elongation: your eye getting getting an egg-shape instead of an oval shape. Three diopters equals about 1 mm in eyeball growth / remodeling (sclera). This process is due to 'lens-induced myopia'.
- Hyperopic defocus is the major cause of axial elongation and myopia. Reduce the strength of your lenses for up close work to prevent hyperoptic defocus, becvause it is the worst thing you can do. People often looking into a microscope need to reduce diopter by -0.5.
- 50cm till blurriness? -2 diopters. 40cm: -2.5. 30cm: -3.25. 22cm: -4.50. 21cm: -4.75. 20cm: -5. 19cm: -5.25. 18cm: -5.5. It can go down half a diopter during the day, but after sleep it resets. Note: author's original measurement ranged from 19.5 to 22.5cm, which gave a slightly too low diopter compared to personal experience and the prescription by the optometrist.
- Every diopter of plus cancels out one diopter of minus.
- First key exercise is active focus: You are looking at a text that is slightly blurry. You lightly blink, and it becomes clear. Do not strain your eyes while doing or trying to achieve active focus.
- Steiner seems to say that axial elongation is biological adaptation, while someone as Mark Warren says that at least a large part is caused by tense extra-ocular eye muscles. Therefore Steiner claims that it is biologically impossible to improve faster.

Mark Warren Method

Mark Warren has an interesting, modern approach with regard to Bates' old method of "swinging", whose method he redesigned and called (his

version of) "Active Focus", and then "Automatic Focus". His primary idea too is that people need to learn to relax the eyes' ciliary muscles, leading to ever longer periods of perfect vision. He just has a different approach than the above methods. His two basic points are:

1. Notice your peripheral vision, ideally every minute of every day.
2. Notice oppositional movement between the object you're looking at versus objects in the foreground or background.

Mark's version of "active focus" (Jake Steiner) or "print pushing" (Todd Becker) by reading a book is to pay attention to the periphery and the oppositional movement as you move the book within and beyond the blur horizon.

Another main technique of Mark Warren to loosen the ciliary and get "clear flashes" is 'Rocking':

1. Hang a piece of paper on the wall, with a text that is slightly blurry.
2. Put an object just below the text.
3. Sit at some distance and rock from side to side.
4. Notice the oppositional movement between the paper and the object in front of it, while you take in the entire periphery.
5. Do this for 2-3 minutes, close your eyes, and keep repeating deaily.
6. Notice any stinging or tearing of your eyes, and wait for a first "clear flash".>

Four steps of the Mark Warre's technique:

1. Ciliary release:
    1. It usually first produces a sharp, stinging motion, followed by tears. It has to relax hundreds to thousands of times though to fully relax. It also needs to strengthen.
    2. Warren first did this by keeping eyes open as long as possible for 5-10 minutes, at most half-blink, while rocking from side-to-side looking at a license plate 10-13 meters away. How far the text is away doesn't matter. The object to spot opposite motion through needs to be slightly below the text. Rocking back-and-forth or in a circle is possible too.
    3. The key is noticing objects in your peripheral and be at the blur.
2. Peripheral awareness.
3. Noticing spacial movement between objects.
4. Relaxation of the entire visual field.

I tried the rocking for some time, but have not had any symptoms or improvements yet. Some do report success stories though:

- **YouTube comment:** *"I found this video and it changed my life. Right after watching this video I tried [active/automatic] focusing on a*

thing and noticing the moment in behind and in seconds I could now see 30-35 feet away trees, objects clearly."

- YouTube comment: *"I had my first breakthrough with active vision today. I felt strong stinging. I could see so clearly."*
- YouTube comment: *"I've watched and will rewatch your videos. I've been doing the rocking in front of an eye chart for almost 2 weeks now. I also had hubby attach some license plates to our shed door - no fences. Today I had a breakthrough! I was rocking side to side, 3rd of 3 3-5 minutes with the 5 second break and without closing my eyes, suddenly things were clear!!! Double, but I could read the letters - this lasted a minute or so, wow! I ditched my glasses a few years ago - -2/-2.25 prescription now, it got worse last year, guess I was still practicing tunnel vision. I really want to improve my vision, I've tried a few programs, but yours is the most effective and makes the most sense."*
- YouTube comment: *"I have been combining your method [Mark Warren] with EM [EndMyopia] and BM [Bates Method] and I'm getting drastic improvement! ... I try to spend time outside in the daylight, for as much as possible. I usually walk in nature up to 2 hours a day, doing active focus and trying to notice movements and peripheral movements. I started at -3.00 in both eyes and currently I'm at -1.85 and 1.78. I am 33 y.o. and have been wearing glasses for 20 years, until December 2020."*
- YouTube comment: *"I read Bates' book and did exercises every now and then and once in a while my eyes will clear up and I'll get a stinging sensation and tears like you described. It's like I'm seeing clearly and blurry at the same time. One particular exercise that I learned from Bates that seems to work the best for me is imagining a black dot, the smaller and darker the better. I'm not sure why that works but usually when I do that my eyes will clear up for a few seconds.""*
- Reddit comment: *"After a couple years of trying "active focus" and Bates stuff, the simple act of paying core attention to my peripheral vision has been the largest improvement technique. I'm convinced its tunnel vision that causes myopia.*

  What [Warren] means is that when trying to achieve active focus you want to pay attention to your peripherals, don't just start at something. In this regard the two methods have the exact same goal of the eyes focusing better. However Warren actually explains how to do it, whereas EndMyopia's instruction and vague and hard to follow."
- Reddit comment: *"I have been using Mark Warren's techniques for a few days and I've gotten one clear flash and lots of semi-clear flashes so far. But today I noticed that my eye balls seem to be bulging. Kinda like axial elongation but more. Also sometimes my eyes become a bit red after releasing too many times. What could be*

causing these things? ...

I think they might actually be swollen or something due to tearing up when the ciliary muscle releases. Both eyes feel noticeably larger. The technique that I use is noticing peripheral movement when I am moving my head, walking or rocking. I just started so I have been doing this for 4 days. I'm around -3.75 in both eyes. ...

Mark's technique requires you to constantly be aware of your peripherals but I should probably do the rocking a bit less and give my eye muscles some breaks."

- Reddit comment: *"I am desperate to improve my vision. Right now my glasses are -6.5 and -6.25... I've gone for walks with and without glasses, and sometimes I'll see a notable but temporary improvement in my vision. Very often I'll go without my glasses and look in the distance and become aware of my peripheral vision, and I'll start to see better. Sometimes I can even read street signs from a very far distance away, but it'll still be kind of blurry. It's like double vision where there's one layer of clarity and another where it's blurry. Usually when this happens my eyes get teary and I get a stinging sensation in my eyes, where it almost feels like they're trying to relax and change their shape or something. It's hard to describe."*
- Reddit comment: *"I got lasik done 4 years ago but my myopia is coming back but mild around -1.25 L and less than -1 R. I've done Mark's recommendations with constantly using my peripherals for almost 2 weeks now and I definitely felt like my eye sight has gotten better. My eyes really stung for the first few days but now it's really hard for them to sting. But my clear flashes went from 2 seconds to like 10 and now on good days during the day I can see really well. My night vision was really bad before but it got slightly better and I swear I'm not imagining it! ...*

[Update:] I had an eye infection in my right eye and went to the doctors yesterday. My myopia on my left eye reduced from 1.25 to 1.00 on the machine. And after reading the eye chart the nurse said I had a 0.9 on my left and 0.8...

[Update:] It went down to -0.75!"
- Reddit comment: *"Mark Warren's method is simply a way to trigger what also is known as "active focus". It works because by paying attention to your periphery you're bringing awareness to your eyes, which is the key to let them do the focusing.*

You'd do better to use it in tandem with the reduced lens method that you can read about on this sub's wiki.

Also, you ought to start slow, because straining the muscles involved too much is known to cause floaters (which you may get anyway, it's impossible to tell).

You don't need to endure the stinging for extended periods of time,

but just a few seconds in order to see progress. With enough practice you'll tear up less and focus faster, so it's not just a tear film.

It takes a lot time and determination, though. You're supposed to pick this up as a habit and perform it 24/7 as long as your eyes are open.

It's also not a completely linear process, the improvement is very subtle. You may experience bad days, double vision, headaches, muscles cramping inside the eye, etc.

The main challenges are:

- finding the right amount of blur to work against, because there can be too little but also too much, you need to experiment until you find what gives your results; - keeping the good habit all day long, because it's all about active focusing.

I recently dropped the glasses for computer use, but it was only 2019 that I needed -1.50D glasses to see sharply up to 65cm~. So far I've been reducing every time I reached the same clarity as before (so when 65cm was clear but I could actively focus up to 1 meter often enough).

The first days of this reduction were challenging, a lot of double vision and headaches, perhaps it would have been easier to do another middle step. However, my eyes are responding and slowly improving just like the previous reductions.

The further I reduced the more time it took to improve, so don't get discouraged if it takes twice or thrice after the first few times.

Generally the improvement goes like this: Blur -> Double vision -> Clear. ...

If you do active focus right your eyes should tear up so often that the chances of dry eye are unlikely. Remember to blink if the visual cortex has given up trying to focus, so it starts another attempt. Simply staring serves no purpose if the muscles involved aren't being used. ...

You likely have noticed how the good focusing has limited time and then often degrades. When it degrades it may still sting/tear, or not, but that's not the stimulus you should give your eyes. You should always aim to the best visual outcome because engaging with poor imagery can trigger temporary ghosting. I mean, I saw Mark's videos and there were those suggestions of not blinking for many minutes, or to drop an unrealistic number of diopters. I found instead that enduring the burning for only 2-3 seconds is enough, and that using glasses where active focusing to perfect clear is possible, even if not easy, made my journey much easier.

I too have experienced several kinds of transient astigmatism:

reddit.com/r/myopia/comments/ 015sue/glasses_detoriate_vision /h2p7ofk/

It can become semi-permanent if you spend a lot of time in blur never letting your eyes clearing the image properly, but it's always

possible to recover by giving them reasonable and clearable challenges.
There's a big chance that this is the mechanism observed in those studies that say that using weaker lenses makes the eyes worse, which is true but not the whole truth.
If you improve without needing to push yourself hard that would be optimal, but if that doesn't work then keep in mind that you can improve with some ghosting as long as you feel your eyes working while focusing further away (it's less efficient, though). In any case, you should aim to get that ghosting as small as possible before reducing again. I'd like to say to make it so there's zero ghosting, but not everyone eyes respond the same.
Once you get to know how your eyes respond, then you'll be able to make the right calls. The hardest part in the reduced lens method is to find just the right amount of blur that grants you consistent progress. (And keeping the good vision habits going, of course)."

- **Reddit comment:** *"Trying to figure out how to relax the eye by noticing the periphery seems to help. I think this is best done while walking outside, but inside is best. I've gotten clear flashes from this.*
I think blood sugar regulation has an effect on eyesight too so you can look into that. I notice eyesight is worse after eating something with a higher glycemic index. "

Other methods

- Popular YouTuber Pigmie, 'How to Fix Your Vision In Only 5 Minutes! Follow Along' (youtube.com/watch?v=OdQJxxpni78): a lot of people in the comments report a quick improvement, but this is unlikely to get you to 20/20 all by itself.

- Nathan Oxenfeld, 'Bates Method 101: Why Eye Exercises Don't Work (and what DOES work)' (youtube.com/watch?v=K3uSK1CfZPY):

    - **YouTube comment:** *"My eyesight got better from -1.5 in right eye and -2.75 in left eye to -0.5 in right and -0.75 in left eye.... After I started to understand the concept of his videos..."*
    - **YouTube comment:** *"I am more like the mechanical way. I got rid of a negative one of myopia in one month and I really needed a lot of eye stretching after sunning and palming. Looking to the right and blink five times, then looking to the left and blink five times, then relax again and go over this for ten times. My vision is really good now. I think Dr. Bates teaching were improved by Meir Schneider although 90% of the credit for the method is Dr Bates for discovering how the eye muscles*

work and introducing the most important relaxation techniques like sunning and palming."

- **YouTube comment:** *"It is always great to go from 20/60 to 20/20. Took 2 years."*

"ISGP method"

Just experimenting with vision improvement methods twice a few days already gave a lot of insights in what works, what the limitations are, and maybe how to do it more efficiently. Quick observations for now:

1. Active focus works: it seems to work as good, or slightly better, as heavy squinting - without actually heavy squinting. I might squint mildly, but also something else is happening.
2. Print pushing works.
3. Jake Steiner is right that improving vision at the short distance, which print pushing starts out with, does not improve vision at longer distance, even though your Edge of Blur improves with up to 25% in just a few days, to the point you technically lose one whole diopter, in my case form -5 to -4.
4. Considering I saw an up to 25% improvement in edge of blur in days, with just a few minutes of practicing a day and no more thinking about it during the rest, Bates was likely right when he wrote that kids simply reading a Snellen card every day in school, improves their vision. If this improves their vision beyond the range of the classroom, very much remains a question though.
5. Shifting, as taught by Bates, seems key.

This segment obvious remains a work in progress.

Eye Exercises

Central fixation

This key Bates method concept postulates that the eye can only see a small area most sharply, the exercise being to focus on such a small area to improve vision. In reality, it may well be that any relaxation of the ciliary muscle and other eye muscles automatically leads to central fixation, without any effort. In any case, in terms of practical results, it may well be quite similar to active focus. How it works:

1. Place some text just outside your blur horizon, so that your eyes are going to have to do some effort to clear it up. You can do this close up, but maybe best is doing it with larger text at farther distances.

2. Measure the distance between you and the text you are reading. Record your results and observations.
3. Relax yourself.
4. Relax your eyes by closing and resting them for a while, especially when they are tired. You can experiment with looking at a tiny black dot from behind your closed eyes, with or without palming - which is an old Bates technique of relaxing the eyes.
5. Look at the text your are trying see. Focus on one letter, or even part of a letter, and try to see it more clearly.
6. After some time of trying, close and relax your eyes again. You can also rapidly blink for some time. Then try again.
7. Give it time. Keep repeating. Keep your eyes relax. And record any progress.

8. You can do this exercise lying down, with the text placed sideways. You may find it much more comfortable to do that way.

Active focus

This is a exercise of various vision programs, in one form or another, but particularly associated with Jake Steiner's EndMyopia program. The idea here is to slowly release, and possibly even consciously control, the ciliary muscle that focuses the lens of your eye. Until you "get it", it appears to be near impossible to describe what active focus is or how to do it. The suspicion is that practicing it forces the brain to make additional neuron connections, similar to how it takes time to learn how to move your pinky by itself. Steps:

1. Look at a text.
2. Move back until it becomes slightly blurry.
3. Blink and try to relax your eyes.
4. Observe if the text became sharper after the blink.
5. Repeat in different conditions until it starts working.
6. Maybe close your eyes for a while if they get tired. You can experiment with looking at a tiny black dot from behind your closed eyes, with or without palming - which is an old Bates technique of relaxing the eyes.
7. People have reported succes with the following additional techniques:
    1. Describing the blur, word for word, line by line.
    2. Imagining hands coming out of your eyeballs and touching the blur.
    3. Creating a sense of pulling back the eyelids without actually squinting. Careful with regard to long-term strain.
    4. Looking at the text from the back of your eyeballs. Careful with regard to long-term eyestrain.

5. Go outside and follow along powerlines.

It appears that many people seem to strain their eyes when trying to see clearly, and employ some form of squinting. There actually are people that have damaged their eyes while practicing a lot of active focus (45-60 minutes a day, for months), leading to white flashes, torn retinas, and lots of floaters in their eyes. Far from everybody has these issues though, so it appears to be related how one implements, or thinks he or she implements, active focus.

Print pushing

This is the Todd Becker version of active focus or the central fixation technique above. Becker recommends you read for 2 to 4 hours a day just within and outside your blur horizon, taking breaks every 15 to 30 minutes to relax your eyes and do a little distance vision. Over the weeks you should notice how your blur horizon moves back bit by bit.

Once you can read clearly at 18 inches / 45 cm distance, you should start introducing plus-lenses 0.5 diopter lower than your myopic diopter. You repeat the process, continually expanding your reading distance and reducing diopters.

Automatic focus

The Mark Warren version of active focus. The idea is that the ciliary muscle of the lens automatically starts releasing when observing peripheral movement.

Automatic focus is all about paying attention to your periphery and noticing the oppositional movement between objects near and far. This is meant to relax the eyes and lead to "active focus".

Palming

To relax the eye muscles. Keep your eyes closed, while covering them with your palms. No contact between the palms of and the eyeballs.

If you see sparks or light flashes, it means the eye muscles are relaxing.

Palming with black dot

Same as above, but while imagining the tiniest black dot as you are palming. This is an old Bates Method exercise. Many people report a major reduction in eye strain by imagining this tiny black dot.

Object tracking

When you're outside, track moving objects with your eyes. Ball sports are especially ideal for this.

Eye patching

Eye patching while active focus distant vision is really effective at making your eyes equal. Doing it for two weeks outside non-stop really helped the NotNott guy - who used to be praised by Jake Steiner, but then became a threat. Normally you should do it 10 minutes a day, as per Jake's recommendations.

Anti-astigmatism exercise 1

If you have mild or heavy double / ghost vision looking, for example, at building edges or lamp posts, focus on the darker image, relax, and slowly, over time, let the ghost image merge with it. The ghost image can start moving around and integrate back and forth before it becomes permanent. Use the active focus blink and relaxation method.

Additional exercises

- The Mind's Eye Visualization
- Memory Visualization
- Spectrum Visualization
- Swinging (Mark Warren's Active Focus, which he renamed Automatic Focus, which are again simple treatment methods you can use to achieve visual correction).

Integrating the exercises

It's possible to experiment with all forms of active focus at once, and include additional exercises on top of that. You put a book around your blur horizon and move through the following four overlapping exercises, seeing what works for you:

1. Active focus: Grab that book, move in and out of the blur horizon, and just go through the motions in trying to get this phenomenon to work. Use all the extra tips as well.
2. Central fixation: This is just one of the ways to effectively get "active focus" to work, with a clear focus on not straining your eyesight.

3. **Automatic focus:** Same as above. Just focus on the periphery and oppositional movement between the book and whatever is in the background or to the side.
4. **Print pushing:** It's another way to get active focus to work and to keep applying it. Just read for several hours just within and outside the blur horizon.

5. **Palming:** As you invariably have to close your eyes for a bit doing the above exercises, do this to relax your eyes.
6. **Palming with black dot:** As you invariably have to close your eyes for a bit doing the above exercises, do this to relax your eyes.
7. **Anti-astigmatism exercise 1:** You can focus on the book's edge or something in the background, or maybe even the words, and see if you have double/ghost vision / astigmatism. If so, try to integrate the ghost image with the real image. In addition this too might help in getting active focus to work, or improve your overall vision.
8. **Eye patching:** If one of your eyes is weaker than the other, do all the above book-related exercises with that eye, patching the other.

For me, I guess it's time to put these words into practice. I will do as much as possible lying down to make the exercises far less tedious.

Above all, be careful not to strain your eyes too much for too long. Certainly when you see an increase in floaters, or notice white flashes in your periphery, a FULL stop and eye doctor visit is highly advised.

Warning: eye floaters and removing them

Quite a few people working on eye improvement, likely due to straining, have reported an increase in floaters in the eye. These can also increase due to tissue damage as a result of high myopia (more than -6.00).

Actually, a few months after doing two weeks of vision improvement, I looked up into the sky and noticed that I myself have developed a large amount of floaters. I always had two clear bacteria-looking floaters, but now, years later, I have a mass of brown floaters. It could be due to a number of things though: getting close to -6, always having eyestrain with glasses on, having done a bit of mid day sungazing on occasion (shifting focus continually didn't cause discomfort, but, despite feeling amazing, also didn't improve vision beyond what you're maximally capable of), or, maybe, the recent active focus exercises. I don't know. But do be careful with the active focus exercises and check for the amount of eye floaters you have before doing any active focus eye exercises.

It does appear that there are several ways to reduce these floaters:

1. Fasting, either intermittent or, even more extreme, carnivore.
2. Healthy plant-based diets.
3. Plant-tied supplements as bromalain.
4. At least one person on YouTube has reported that stopping smoking removed the floaters: *"Since I quit smoking I almost have none."*
5. Rubbing castor oil on the eyelids.

Some raw testimony with regard to intermittent and carnivore:

- **Reddit comment:** *"I've been doing OMAD [One Meal a Day diet, only a 1 hour window of eating] since February (Valentine's Day) and am coming up on 6 months on August 14th. All the floaters in my right eye are gone. I just noticed today because if you have floaters, you learn to live with it and ignore it after a while until you look at a white wall or something.*
  There's one floater in my left eye that is now REALLY diminished and I think it is going down as well. If this keeps up, I'll finally be free of floaters again and have my vision back.
  Why aren't there more posts about this on this sub? I searched and only found like 3 posts talking about it and the discussions were short.
  Some people say they get great results with eye floaters after a 3 day fast, but I haven't done that in years and I don't think I can do one for a while. Those are very tough to do. But this OMAD diet though... holy shit. This is just another new positive side effect."

- **Reddit comment:** *"This is crazy. I've recently added weekly 36 hour fasts to 14:10 IF that I've been doing for at least 5 years and only noticed the improvement after reading this! I've had at least two in both eyes since I was a teenager and now just have one."*

- **Reddit comment:** *"Now that you talk about floaters, they've actually decreased for me too [after starting intermittent fasting]. I didn't even notice."*

- **Reddit comment:** *"Same here! IF is amazing!!"*

- **Reddit comment:** *"Wow after reading this I just checked mine and it's diminished significantly! You do learn to live with it and I just haven't really noticed. Thanks for posting this!"*

- **Reddit comment:** *"I had not noticed the correlation but mine are also gone...spooky! Thanks for pointing it out - I hadn't put two and two together."*

- **Reddit comment:** *"Jordan Peterson said that his eye floaters went away with carnivore diet. Maybe cutting carbs is the key."*

- **Reddit comment:** *"I have done Keto OMAD for 1,5 year. With some 2-5 day fasts. And 1x30 day fast. And one big surprise to me was that one of my eyes can now see much smaller writings. Before I needed to have whatever very close to my eye. But now i need to keep it at some distance to read it properly. And i can read much smaller letters than before. But its mostly only on the one eye that this huge improvement happend.*
  Have been wearing glasses for over 35 years. Will probably need new glasses soon because one eye is now imoroved so much. BUT I did notice that when I was off keto, back to high carb for 2-3 weeks, it gradually worsened again."

- **YouTube comment:** *"I read a blog recently about a woman she did 10 water fast and her floaters started to improve."*

Some raw testimony with regard to a plant-based diet:

- **YouTube comment:** *"The floaters cleared up in my eyes after I went WFPB [Whole Foods Plant Based diet]."* **Reply:** *"Not mine. i've been WFPB for 10 years now. my floaters are worse. I'm almost 40. It's part of aging."*

- **YouTube comment:** *"This is definitely TRUE Ive been vegan 8 years and mine have disappeared."* **Another post:** *"I have them in right eye since 2007 after a punch to the eye; vegan since 2012 but haven't eaten much pineapples because they give me heartburn. Im used to them after all these years, they look like translucent parasitic worms."* **Another post:** *" 10 year vegan, whole foods. my floaters are worse. I actively avoid looking at bright backgrounds now because of it."*

- **YouTube comment:** *""*

- **YouTube comment:** *"I had lots of floaters after my husband died in 2004, but now they are completely gone. I changed from lacto-ovo-vegetarian to whole foods plant-based and no oil in 2015."*

- **YouTube comment:** *"I'm kind of fond of my floaters. I recognise them like old friends. Weirdly they're all in my left eye. Probably gotten more numerous and noticeable since I went vegan 9 years ago. However my eyesight improved quickly when I went vegan at 32. It was starting to be blurry at times when looking up at a menu or when fatigued. 41 now and this has not come back."*

Some raw testimony with regard to taking Bromalain or its only source, pinapples:

The author's eyesight improvement progress

The author only published this article after making gains himself. They were beginner gains, but at the very least it demonstrates to me personally that eyesight improvement is real, in however limited a fashion for now. I managed to extend my "edge of blur" with 10-20%, with additional, real world improvements at 50-100% greater distances that the edge of blur. My eyesight went back to baseline though when not practicing for a few weeks. Any long-term sustained exercising... maybe one day...

2024

- **10/10:** Edge of blur: 20.5cm, which equals -5. Just a test, and a very honest one. The slightest amount of blur: that's it. No exercises are done for now.

- **11/11, evening:** Edge of blur also 20.5cm. This time I do various "describing the blur" exercise variations. I have no real clue what I'm doing though.
- **11/12, morning:** Edge of blur: I swear it's about 22cm. Have I measured wrongly the past two times? Maybe I was more tired? I was very truthful in each case.
- **11/13, morning:** Edge of blur: 23.5cm. This seems to be improving fast. Crazy.
- **11/13, afternoon:** Edge of blur: Definitely 24cm (-4.25) after more practice. Seems I improved a bit during practice. Seems like I can activate my ciliary muscle. It's like a squint maybe, but more of the eye itself. Or like pulling your eyelids in. It seemed to improve readability by about 1cm. When I put my -4.75 glasses on though, I don't seem to see any sharper. The same number plates and signs are not readable.

- **11/19:** 30cm unreadably blurry, but over a minute-plus I can clear it up to relatively easy readability, with brief periods of quite sharpness. I again get muscle-like soreness behind and above the upper eyelids. Long-distance rocking for 10 minutes also seemed to increase soreness after a while. Still, perfect ordinary vision is 22cm with 24cm being virtually sharp.

- **11/21, morning:** 30cm a big blur starting out from that. Rapid blinking gives a sense of non-stop dry eyes (I also hear the blink), but also

helps in rapidly improving focus. Each blink the vision is quite clear for a split second. 35cm an even bigger blur initially, but to my surprise I could quickly clear it up to the point many words were readable. Regular view the same: up to 22.5cm is superclear. Up to 24.5cm I can say it's clear, but anything beyond that would be dishonest.

- **11/22:** 30cm I can see instantly, albeit still very blurry with many of the words much of the time. 40cm: almost instantly to max sharpness. Pretty much impossible to discern words. Afterwards, the edge of blur definitely is 24.5-25cm. That's the first time I can say this. 25.5-26cm definitely gets blurry.
- **11/23:** Still at 23.5cm edge of blur, right off the bat. I worry about reports that some people have damaged their eyes with "describing the blur", apparently by doing it wrong. I can't say for sure what the "right" way is though. I'll try print pushing with phone. Acceptable edge of blur for small Reddit text on my phone is 23cm. Bit bigger text maybe 24cm.

- **11/25:** In this period I regularly prefer reading on my phone without glasses. The extra few centimeters make it much easier to read at a comfortable distance. I also watch a miniserie on my laptop without glasses, without it bothering me. I just lay sidways on my pillow with the laptop rotated 90 degrees about 30cm from my face. I stop the exercises though and over december notice I prefer my glasses again with my phone/.

2025

- **06/25:** A test a few hours into being awake. Eyes not tired. Haven't done eye exercises in 8 months. I do a test with my monitor with decent size text. Edge of blur: back to 20.5cm (-5). It got me worried. I thought it might be worse than my initial measurement 8 months ago, but it turns out it's the exact same distance.
- **06/26:** Evening but eyes not really tired.
  - **30cm:** Quickly becomes readable after a lot of blinking.
  - **40cm:** Quickly becomes discernable.
  - **50cm:** Completely impossible. I can "sharpen" the text easily, but not to the point I can make out any words.
  - **Edge of Blur:** About 21.5cm.
- **06/27, upon wake up:**
  - **30cm:** A bit better.
  - **40cm:** A bit better.
  - **50cm:** Can regularly discern words or parts of sentence with major difficulty.
  - **Edge of Blur:** At least 22cm and maybe up to 23.5cm.

- **4K 27" monitor:** At about 35cm, I can work in Sublime Text, but it is very tedious. The relatively large text (black background) is just readable/discernable 80% of the time. This is a lot better though than two days ago, when I couldn't read anything.

- **06/28, upon wake up:**
  - **30cm:** Can discern most words in seconds. After a lot of blinking and with active focus, decently sharp with mild whiteness around the letters. It still requires considerable effort to be relatively easily readable.
  - **40cm:** Same as yesterday. In seconds discernable. Active focus, blinking and some shifting about is needed, but then regularly quite easy to read.
  - **50cm:** In the first seconds I could regularly clearly make out words, part of a sentence, or several sentences. But certainly after a minute everything remained too blurry to discern.
  - **Edge of Blur:** 24.5-25cm.
- **06/29, upon wake up:**
  - **50cm:** Seems slightly clearer all over, but just beyond discernability. sometimes words become readable.
  - **40cm:** After a lot of blinking and a bit of active focus, hard but fully readable.
  - **30cm:** Almost fully sharp with active focus. Without it, still pretty much fully readable; just with some annoying white and blur artifacts. It shocked me.
  - **Edge of Blur:** 25-26cm (-4,-3.75). Quite possibly 26cm, but I'm trying to be cautious. 25cm is a minimum certainty. I can't say I see sharper at a distance though through my glasses at regular distances, despite my prescription having gone down from -5 to -4 in the past days, at least in the 20-30cm distance.
- **06/30:**
  - **50cm:** With effort, some of the sentences and words were discernable for the first 20s or so. Then it became less. **Later that day, after brief sleep:** I can almost continually discipher words and sentences, with effort. Seems overall slightly clearer again.
  - **40cm:** Not done initially. **Second time that day:** With effort - blinking, shifting focus regularly, and active focus - I can pretty much discipher the entire text and slowly read.
  - **30cm:** Very readable but with whiteness and minor blur. Sometimes I need to shift focus to read a word.
  - **Edge of Blur:** 25.5cm seems fair. Beyond that, slight aberrations.
- **07/01:**
  - **300cm:** Large "Action" I can just make out with active focus.
  - **50cm:** First seconds just not discernable. Then two moments in which words around "hope" and such were quite clear. After

that a very large part was *just* discernable. With a little head movement could read partial sentences.

read the back cover text and also the bio text below it mostly. I have to AF and shift head/eyes, and it is slow, but I read it all. Definitely an improvement, if not breakthrough. 40cm: takes a few seconds to be one clearer. With AF I can read everything decently quick, only held back by some words that need refocusing. i can just read without af eventually, but need to shift and AF for some words. 30cm: blurry. worse. Eady read though. Edge of blur: 25cm

- **07/02:**
  - **300cm:** Large "Action" I can just make out with active focus.
  - **50cm:**I read the back cover text and also the bio text below it mostly. I have to active and shift head/eyes, and it is slow, but I read all of the top text and half of the bio info at maybve 1/4th the regular speed. Definitely an improvement, if not a mild breakthrough.
  - **40cm:** Takes a few seconds to be clearer. With active focus I can read everything decently quick, only held back by some words that need refocusing. I can just read without active focus eventually, but need to shift and use active focus for some words.
  - **30cm:** Not done.
  - **Edge of Blur:** 25cm. Slightly less then before. When eyes are tired it can go tp 22cm. It seems this aspect has stopped improving, which may not be bad, because improving at this short distance, doesn't seem to have any effect on longer distances.
- **07/03:**
  - **300cm:** Large "Action" I can just make out with active focus.
  - **50cm:** Initially vague and unreadable. Not sure if blinking or eye exercises do anything. Active focus clears it up just enough to half-discernibility. Then reading while turning my head I can read everything slowly, also below. That shifting of the head regularly makes text pretty sharp whereas a second before it's too blurry to decipher. 40cm: 30cm:
  - **40cm:** Blurry for the first few seconds. At most decipherable at that point. With active focus and shifting the text quickly becomes readabe at normal speed, apart from some words.
  - **30cm:** Not done.
  - **Edge of Blur:** 24cm, late in the day, after sleep.
- **07/04:**
  - **50cm:** Accidentally. I auto-moved to 45cm, so I can easily decipher with active focus except some words. Second time I accidentally moved to 48 cm. Fefinitely harder, but can still slowly read.

- **60cm:** To my surprise, I can identify words and partial sentences every other second. For a split seconds these words are decently sharp.
- **30cm:** No improvement. Seemingly even a bit less than before. I can read the text, but far from sharp.
- **Edge of Blur:** 23.5cm.
- **120cm:** To my surprise, "Order" text discernable with active focus.

- **07/05, upon wake up:**
  - **70cm:** Blurry, but with active focus and shifting I made words regularly visible and at one point for a full 10s (holding the angle) a whole section of sentences. Not just discernable, but readable.
  - **60cm:** Starts out superblurry, but just active focus while lightly nodding head up and down, and the text rapidly becomes a mix of discernable and readable. I can read all sentences slowly in this manner.
  - **30cm:** No improvement. I can read the text, but far from sharp.
  - **Edge of Blur:** Strangely, just 23cm, despite serious improvements at 40-70cm since reach 25-26cm edge of blur.

Notes

1. July 19, 2023, Front Public Health, 'Effects of physical activity combined with different visual target presentation durations of ciliary-muscle training on visual acuity in children'. The kids were playing open-skill and closed-skill sports with extra focus on visual-target tracking three times a week, for 32 weeks.
2. July 21, 2019, International Journal of Environmental Research and Public Health, 'Dose–Response Relationship of Outdoor Exposure and Myopia Indicators'.
3. 1867, Prof. Hermann Cohn (1838–1906; Breslau University, Prussia), 'Untersuchingen der Augen von 10060 Schulkindern' ('Investigations of the Eyes of 10,060 School Children').
4. Sep. 2013, Optometry and Vision Science journal (American Academy of Optometry), 'Bright Light Induces Choroidal Thickening in Chickens'.
5. July 1, 2016, Scientific American, 'A World Where Everyone Needs Glasses?'.
6. Ibid.
   *) Aug. 22, 2023, Wired, 'The World Is Going Blind'.
7. July 1, 2016, Scientific American, 'A World Where Everyone Needs Glasses?'.

8. July 1, 2016, Scientific American, 'A World Where Everyone Needs Glasses?'.
9. Dec. 2018, Queensland University of Technology (Australia), 'Choroidal changes in human myopia: insights from optical coherence tomography imaging': *"The choroid is a vascular tissue which plays a range of critical roles in the normal physiology of the eye, such as supplying the outer retina with oxygen and nutrients and the regulation of intraocular pressure. ... Studies have demonstrated that choroidal thinning accompanies the development and progression of myopia... Dramatic thinning of the choroid is seen with high myopia...*
   Recently, reading standard black-on-white text was found to activate the retinal OFF pathway and induce choroidal thinning, which is associated with myopia onset. Contrarily, reading white-on-black text led to thicker choroids, being protective against myopia."
10. Aug. 22, 2023, Wired, 'The World Is Going Blind'.
11. Ibid.
12. May 19, 1881, Popular Science Monthly, 'Eyes and School-Books'.
13. Jan. 15, 2020 YouTube upload by 'Jake Steiner', 'Matt: -5.00 To No Glasses | Shortsighted Podcast | Jake Steiner'.
14. Feb. 16, 2020 YouTube upload by 'Jake Steiner', ' Gina: From -6.50 To -3.75 (Opto Confirmed) | Shortsighted Podcast | Jake Steiner'.
15. Feb. 1, 2017, Otis Brown and Peter Greene for the EC ophthalmology journal, 'Review: +2 to +3 D. Reading Glasses to Prevent Myopia': *"Details from preliminary experimental design using reading glasses at the U.S. Naval Academy at Annapolis are discussed. The conclusion is that positive (+) Add lenses, used as reading glasses during study, can prevent the development of myopia of college students in pilot training."*
16. Jan. 19, 2023 YouTube upload by 'Jake Steiner', 'Print Pushing: Does It Work? | Endmyopia Q&A | Jake Steiner'.
17. Jan. 15, 2020 YouTube upload by 'Jake Steiner', 'Matt: -5.00 To No Glasses | Shortsighted Podcast | Jake Steiner'.